15

## <u>Claims</u>

What is claimed is:

- 1. A vascular catheter comprising:
- An elongated tubular member with a proximal shaft portion and a distal shaft portion, the distal shaft section has a first stiffness;

An intravascular device on the distal shaft portion, the distal shaft section has a second stiffness at the intravascular device position; and

A transition member on the distal shaft portion bridging the first stiffness and second stiffness.

- 2. A catheter of claim 1 wherein the transition member comprises a tubular member.
- 3. A catheter of claim 1 wherein the transition member is positioned on the distal shaft section on at least one side of the intravascular device.
- 4. A catheter of claim 1 wherein the transition member is positioned on the distal shaft section on both sides of the intravascular device.
  - 5. A catheter of 1 wherein the transition member comprises a radiopaque marker.
  - 6. A vascular catheter for performing vascular procedures, the vascular catheter comprising:

An elongated shaft having an elongated inner shaft, an elongated outer shaft coaxial with the inner shaft, a proximal shaft section and a distal shaft section;

A means for performing a vascular procedure on the distal shaft section; and

A transition means on the distal shaft section adjacent the means for performing a vascular procedure.

- 7. A vascular catheter of claim 6 wherein the means for performing a vascular procedure is a stent delivery system.
- 8. A vascular catheter of claim 6 wherein the transition member is a sleeve on the inner shaft of the vascular catheter.
- 5 9. A vascular catheter of claim 6 and wherein the transition member further comprises a radiopaque marker.